

WHAT IS CLAIMED IS:

1. A high temperature/high pressure vessel for treating a workpiece placed in the interior of the vessel at a high temperature and a high pressure, said vessel comprising:

a cylindrical body, with piano wire wound under tension round an outer periphery of said cylindrical body; and

lid members which tightly close axial openings of said cylindrical body so as to be disengageable from said openings,

said cylindrical body comprising:

an inner cylinder;

a plurality of spacers arranged along an outer periphery surface of said inner cylinder; and

an outer cylinder fitted on said inner cylinder through said spacers,

wherein cooling water flow paths are formed each between adjacent said spacers, said cooling water flow paths extending from one end side to an opposite end side of said cylindrical body.

2. The high temperature/high pressure vessel according to claim 1, wherein, after fitted in a state of a high temperature on outer peripheries of said spacers, said outer cylinder is shrunk and deformed as the temperature drops.

3. The high temperature/high pressure vessel according to claim 1, wherein, after fitted on outer peripheries of said spacers, said outer cylinder is shrunk and deformed by the winding of said piano wire.

4. The high temperature/high pressure vessel according to claim 2,

wherein said spacers are fixed to the outer periphery surface of said inner cylinder by means a clamp member fitted in each of outer grooves and having a thickness not larger than the depth of each said outer groove, said outer grooves being formed respectively in said spacers in a direction orthogonal to the spacers.

5. The high temperature/high pressure vessel according to claim 3, wherein said spacers are fixed to the outer periphery surface of said inner cylinder by means of a clamp member fitted in each of outer grooves and having a thickness not larger than the depth of each said outer groove, said outer grooves being formed respectively in said spacers in a direction orthogonal to the spacers.

6. The high temperature/high pressure vessel according to claim 1, further comprising:

a cooling water supply header for the supply of cooling water to said cooling water flow paths, said cooling water supply header being disposed in a watertight manner on the one end side of said cylindrical body; and

a cooling water collecting header for the collection of cooling water flowing out from said cooling water flow paths, said cooling water collecting header being disposed in a watertight manner on the opposite end side of said cylindrical body opposite to said cooling water supply header.

7. The high temperature/high pressure vessel according to claim 6, wherein said cooling water supply header and said cooling water collecting header are constructed so that they can be mounted and removed.

8. The high temperature/high pressure vessel according to claim 1,

wherein said piano wire is wound round an outer periphery of said outer cylinder through spacer pieces, with leakage water guide paths being formed transversely outwards of each said spacer piece to guide leakage water toward an end portion of said cylindrical body which leakage water leaks from said cooling water flow paths, and leakage water detecting means are provided in said leakage water guide paths.

9. The high temperature/high pressure vessel according to claim 1, wherein said spacers are flat bars.

10. A high temperature/high pressure vessel for treating a workpiece placed in the interior of the vessel at a high temperature and a high pressure, said vessel comprising:

a cylindrical body;

lid members which tightly close axial openings of said cylindrical body so as to be disengageable from said openings;

a plurality of spacers arranged along an outer periphery surface of said cylindrical body; and

cooling water pipes each interposed between adjacent said spacers and extending from one end side to an opposite end side of said cylindrical body,

wherein piano wire is wound under tension round outer peripheries of said spacers.

11. The high temperature/high pressure vessel according to claim 10, wherein said cooling water pipes are brought into close contact with the outer periphery surface of said cylindrical body by deformation caused by the winding of said piano wire.

12. The high temperature/high pressure vessel according to claim 10, wherein a heat conductive material is filled between the outer periphery surface of said cylindrical body and said cooling water pipes and also between said cooling water pipes and said spacers.

13. The high temperature/high pressure vessel according to claim 10, further comprising:

a cooling water supply header for the supply of cooling water to said cooling water flow paths, said cooling water supply header being disposed in a watertight manner on the one end side of said cylindrical body; and

a cooling water collecting header for the collection of cooling water flowing out from said cooling water flow paths, said cooling water collecting header being disposed in a watertight manner on the opposite end side of said cylindrical body opposite to said cooling water supply header.

14. The high temperature/high pressure vessel according to claim 13, wherein said cooling water supply header and said cooling water collecting header are constructed so that they can be mounted and removed.

15. The high temperature/high pressure vessel according to claim 10, wherein said spacers are flat bars.